WHAT IS CLAIMED IS:

Sub A2

1. A pixel defect detector for a solid-state imaging device comprising a plurality of photoelectric transducers, the pixel defect detector comprising:

a calculation section for obtaining output characteristics of a subject photoelectric transducer for varied amounts of light incident thereupon so as to determine the presence/absence of a defect in the subject photoelectric transducer based on the output characteristics thereof.

2. A pixel defect detector for a solid-state imaging device according to claim 1, wherein:

the pixel defect detector further comprises a picture memory for storing an output signal from the photoelectric transducer; and

the calculation section determines the output characteristics of the subject photoelectric transducer using the output signal of the subject photoelectric transducer stored in the picture memory.

3. A pixel defect detector for a solid-state imaging device according to claim 1, wherein:

the output characteristics of the subject photoelectric transducer are represented by a plurality of output signals of the subject photoelectric transducer in response to different amounts of light incident thereupon, respectively.

4. A pixel defect detector for a solid-state imaging device comprising a plurality of photoelectric transducers, the pixel defect detector comprising:

a picture memory for storing outputs from a subject photoelectric transducer in response to different amounts of light incident thereupon, respectively; and

a calculation section for determining a photoelectric coefficient **a** of the subject photoelectric transducer and an offset output level **b** of the subject photoelectric transducer in the absence of incident light based on the amounts of incident light, the outputs from the subject photoelectric transducer therefor, and Expression (1) below, so as to compare the photoelectric coefficient **a** and the offset output level **b** with a predetermined reference photoelectric coefficient a_0 and a predetermined reference offset output level b_0, respectively, thereby determining the presence/absence of a defect in the subject photoelectric transducer:

$$y(x)=ax+b \quad \ldots (1)$$

where y(x) denotes the output of the subject photoelectric transducer, and x denotes the amount of incident light.

5. A pixel defect detector for a solid-state imaging device according to claim 1, wherein:

the pixel defect detector further comprises an optical system for projecting a picture onto the solid-state imaging device; and

the output of the photoelectric transducer is determined while the optical system is defocused with respect to the solid-state imaging device.

6. A pixel defect detector for a solid-state imaging device according to claim 4, wherein:

the pixel defect detector further comprises an optical system for projecting a picture onto the solid-state imaging device; and

the output of the photoelectric transducer is determined while the optical system is defocused with respect to the solid-state imaging device.

7. A pixel defect detector for a solid-state imaging

device according to claim 1, wherein:

the amounts of light incident upon the subject photoelectric transducer comprise an amount of incident light when no light is incident upon the solid-state imaging device and another amount of incident light which brings the solid-state imaging device to a near-overflow state.

8. A pixel defect detector for a solid-state imaging device according to claim 4, wherein:

the amounts of light incident upon the subject photoelectric transducer comprise an amount of incident light when no light is incident upon the solid-state imaging device and another amount of incident light which brings the solid-state imaging device to a near-overflow state.

9. A pixel defect detector for a solid-state imaging device according to claim 4, wherein:

the amount of incident light x is determined by applying, to Expression (2) below, the predetermined reference photoelectric coefficient a_0, the predetermined reference offset output level b_0, and a reference output signal y_0:

$$x=(y_0-b_0)/a_0 \quad \ldots (2).$$

10. A pixel defect detector for a solid-state imaging device according to claim 9, wherein:

the output y_0 is set to a median among outputs from a plurality of photoelectric transducers neighboring the subject photoelectric transducer.

11. A pixel defect detector for a solid-state imaging device according to claim 10, wherein:

the neighboring photoelectric transducers comprise only those which display the same one of a plurality of colors to be displayed as that of the subject photoelectric transducer.

12. A pixel defect detector for a solid-state imaging device according to claim 4, wherein:

the presence/absence of a defect in the subject photoelectric transducer is determined by applying the photoelectric coefficient **a** of the subject photoelectric transducer, the offset output level **b** of the subject photoelectric transducer, the reference photoelectric coefficient a_0, and the reference offset output level b_0, to Expression (3) below:

no defect, if $|a_0-a|<\Delta a$ and $|b_0-b|<\Delta b$ ... (3)

where Δa and Δb are predetermined threshold values.

13. A pixel defect detector for a solid-state imaging device according to claim 4, wherein:

the presence/absence and the type of defect in the subject photoelectric transducer are determined by applying the photoelectric coefficient **a** of the subject photoelectric transducer, the offset output level **b** of the subject photoelectric transducer, the reference photoelectric coefficient a_0, and the reference offset output level b_0, to Expression (4) below:

no defect, if $|a_0-a|<\Delta a$ and $|b_0-b|<\Delta b$;

a black blemish, if $|a_0-a|\geq\Delta a$; and

a white blemish, if $|b_0-b|\geq\Delta b$ ... (4)

where Δa and Δb are predetermined threshold values.

14. A pixel defect detector for a solid-state imaging device according to claim 12, wherein:

the reference photoelectric coefficient a_0 and the reference offset output level b_0 are prescribed for

each of the colors to be displayed.

15. A pixel defect detector for a solid-state imaging device according to claim 13, wherein:

the reference photoelectric coefficient a_0 and the reference offset output level b_0 are prescribed for each of the colors to be displayed.

16. A pixel defect detector for a solid-state imaging device according to claim 12, wherein:

the pixel defect detector further comprises a determination section for determining a color to be displayed by the subject photoelectric transducer based on address data of the subject photoelectric transducer; and

the reference photoelectric coefficient a_0 and the reference offset output level b_0 are prescribed based on the determination by the determination section.

17. A pixel defect detector for a solid-state imaging device according to claim 13, wherein:

the pixel defect detector further comprises a determination section for determining a color to be displayed by the subject photoelectric transducer based

on address data of the subject photoelectric transducer; and

the reference photoelectric coefficient a_0 and the reference offset output level b_0 are prescribed based on the determination by the determination section.